



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,984	09/30/2003	Brian K. Smith	CE11461JDP	4974

24273 7590 06/04/2007
MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
LAW DEPT
8000 WEST SUNRISE BLVD
FT LAUDERDAL, FL 33322

EXAMINER

CASCA, FRED A

ART UNIT	PAPER NUMBER
----------	--------------

2617

MAIL DATE	DELIVERY MODE
-----------	---------------

06/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,984	Applicant(s) SMITH ET AL.	
	Examiner Fred A. Casca	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-19 is/are rejected.
- 7) ☒ Claim(s) 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to applicant's amendment filed on March 16, 2007. Claims 1-19 are still pending in the present application. **This Action is made FINAL.**

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 6, and 8-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orava et al (US 2003/0177267 A1) in view Laux et al (US 2004/0090929 A1) further in view of Khayrallah et al (US 5920597).

Referring to claim 1, Orava discloses an enhanced passive scanning method for a wireless local area network (abstract and paragraph 29, "passive scanning"), comprising receiving a beacon signal or a gratuitous probe response (figure 4 and paragraph 53).

Orava does not specifically disclose updating a site timing table entry in a site timing table based on the received beacon signal or gratuitous probe response; and setting a scan start time based on entries in the updated site timing table.

Laux discloses measuring intervals between beacons received in wireless communication system and then adjusting a timer according to the values of the intervals (paragraphs 114 and figures 6, 7, 11, "wireless device 110 probing its access point 102 and adjusting its timer", "determines whether the interval between beacons . . . scanned represents a . . . long period of

time”, “If interval between beacons is relatively long, wireless device 110 actively probes the access point 102 . . . updates the channel list in the table 700”, note that a scan inherently takes place for either for a neighboring).

It would have been obvious to one of the ordinary skills in the art at the time of invention to modify the method of Orava by incorporating the teachings of Laux and consequently providing the method of Orava with a timing table to insert the results of measuring intervals into the table and updating the table, and then set a scan start time based on entries in the updated table, for the purpose of providing an efficient and energy saving scanning system where battery power is saved by preventing frequent unnecessary scanning.

The combinations of Orava/Laux do not specifically disclose scan time for a neighboring access point or mobile device.

Khayrallah discloses scan time for a neighboring access point or mobile device (col. 3, lines 15-30, “This allows a mobile locked in conversation to the traffic superframe format to scan neighboring base stations”).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Orava/Laux by incorporating the teachings of Khayrallah and allow the scan time to be used for neighboring access points for the purpose of finding a better access point with stronger signal strength.

Referring to claim 14, claim 14 defines an enhanced passive scanning system reciting features analogous to the features of the passive scanning method defined by claim 1 (as rejected

above). Thus, the combinations Orava/Laux/Khayrallah disclose all elements of claims 14 (please see the rejection of claim 1 above).

Referring to claims 2 and 15, the combinations of Orava/Laux/Khayrallah disclose the method and system of claims 1 and 14, and further disclose at least one of the beacon signal or the gratuitous probe response are received from at least one of a mobile station and or access point (see rejection of claim 1).

Referring to claims 6 and 19, the combinations of Orava/Laux/Khayrallah disclose the method of claims 1 and 14, and further disclose determining a power mode for a wireless communication device based on the scan start time (Laux, paragraph 114, note that interval between beacons is determined and then probing the access time is set according to the determined intervals, further probing the access points prompts the device 110 to be in an active mode, thus a different power mode. Hence, a power mode is inherently determined based on the scan start time).

Referring to claim 8, the combinations of Orava/Laux/Khayrallah disclose the method of claim 1 and further disclose scanning at least one channel for the beacon signal or the gratuitous probe response (Orava, figure 4 and paragraph 5).

Referring to claim 9, the combinations of Orava/Laux/Khayrallah disclose the method of claim 8 and further disclose scanning at least one channel comprises one of performing an active scan, performing a passive scan, or performing an enhanced passive scan (Orava, figure 4 and paragraph 5).

Referring to claim 10, the combinations of Orava/Laux/Khayrallah disclose the method of claim 1 and further disclose creating the site timing table with at least one site timing table entry, the site timing table based on a received beacon signal or a gratuitous probe response (see rejection of claim 1).

Referring to claims 11 and 16, the combinations of Orava/Laux/Khayrallah disclose the method and system of claims 10 and 15, and further disclose creating the site timing table entry comprises tuning to an access point channel, receiving at least one of the beacon signal or the gratuitous probe response, collecting transmission measurements of an access point, and storing access point information in the site timing table (Laux, paragraphs 114 and figures 6, 7, 11, note that creating a list or table of beacons inherently include listening and tuning to the beacon signals).

Referring to claims 12 and 17, the combinations of Orava/Laux/Khayrallah disclose the method of claims 1 and 14, and further disclose selecting an access point based on the received beacon signals and gratuitous probe responses (figure 4).

Referring to claims 13 and 18, the combinations of Orava/Laux/Khayrallah disclose the method of claims 1 and 14, and further disclose generating an enhanced passive scan schedule based on at least one site timing table entry in the site timing table, the enhanced passive scan schedule including a channel number, a local scan start time, and a maximum channel scan time for each site timing table entry in the site timing table (see rejection of claims 1 and 3).

4. Claim 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Orava et al (US 2003/0177267 A1) in view Laux et al (US 2004/0090929 A1) further in view of Khayrallah et al (US 5920597) and further in view of well known prior art (MPEP 2144.03).

Referring to claim 3, the combinations of Orava/Laux/Khayrallah disclose the method of claim 1 wherein the beacon signal is received from an access point (see rejection of claim 1 above).

The combinations of Orava/Laux/Khayrallah do not disclose, the beacon signal includes an access-point timestamp, a beacon interval, a basic service set identifier, and a traffic indication map.

The examiner takes official notice of the fact that an access-point timestamp, beacon interval, a basic service set identifier, and a traffic indication map are well known terms.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Orava/Laux/Khayrallah by incorporating well-known concepts in the art for the purpose of providing an efficient and energy saving scanning system.

Referring to claim 4, the combinations of Orava/Laux/Khayrallah disclose the method of claim 1 wherein gratuitous probe response is received from an access point.

The combinations of Orava/Laux/Khayrallah do not disclose an access-point timestamp, a beacon interval, a basic service set identifier, and a traffic indication map.

The examiner takes official notice of the fact that an access-point timestamp, beacon interval, a basic service set identifier, and a traffic indication map are well known terms.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Orava/Laux/Khayrallah by incorporating well known concepts in the art for the purpose of providing an efficient and energy saving scanning system.

Referring to claim 5, the combinations of Orava/Laux/Khayrallah disclose the method of claim 1.

The combinations of Orava/Laux/Khayrallah do not disclose the site timing table includes access point timestamp, a local station timestamp, a beacon and probe interval.

The examiner takes official notice of the fact that an access-point timestamp, beacon interval, a basic service set identifier, and a traffic indication map are well known terms.

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the method of Orava/Laux/Khayrallah by incorporating well known concepts in the art for the purpose of providing an efficient and energy saving scanning system.

Allowable Subject Matter

5. Claim 7 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


LESTER G. KINCAID
SUPERVISORY PRIMARY EXAMINER